





PHILIPS

<p>Philips Electronics Industries (Taiwan) Ltd - EMC Lab. 5, Tze Chiang 1 Road, Chungli Industrial Park, Chungli, Taoyuan, Taiwan Tel.: +886-3-454-9862 Fax.: +886-3-454-9887 E-mail: ronnie.yang@philips.com</p>	<h2>FCC Test Report</h2>	<p>Report No.: TYR87-2024</p> <p>Date : 02 September, 2002</p> <p>Page : Page 1 of 40</p>
<p>Customer : Philips Electronics Industries</p> <p>Name : Mr. S.T. Huang – EE LCD</p> <p>Address : 5, Tze Chiang 1 Road,</p> <p>Zip/City : Chungli Industrial Park,</p> <p>Country : Chungli, Taiwan, R.O.C.</p>		
<p>Equipment Under Test (including peripherals) :</p> <p>FCC ID. : A3KM110</p> <p>Model Name : P4831</p> <p>Serial Number : TW233PA001</p> <p>Description : 20" XGA LCD color monitor, Max. resolution 1600x1200/75Hz</p>		
<p>EMC Standards : FCC Part 15 of October 01,1999 Class B ANSI C63.4-1992</p> <p>Result : PASSED the limits/test-levels in the standards.</p> <p>Note : The results in this report apply only to the sample(s) and mode(s) tested. It is the manufacturer's responsibility to assume the continued EMC compliance of production models.</p>		
<p>Date of receipt of EUT : 22 Aug. 2002</p> <p>Date of performance of test : 24 Aug., 2002 to 26 Aug., 2002</p>		
<div style="display: flex; justify-content: space-around;"><div style="text-align: center;"> C.C. Wu - EMC Test Engineer</div><div style="text-align: center;"> Ronnie Yang - EMC Manager NVLAP Signatory</div></div>		

Philips Electronics Industries (Taiwan) Ltd

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1. Summary of test results

Test	Standard	Result	Note
Emission, ANSI C63.4-1992			
Conducted emission	FCC Part 15	Passed	
Radiated emission	FCC Part 15	Passed	

Remark:

The test sample fully complies with the requirements set forth in : FCC Part 15 Class B.

2. General Information of EUT

The EUT, 20" color monitor :

Model No. : P4831
 FCC ID : A3KM110
 Brand : HP

The color monitor automatically scans horizontal frequencies between 30KHz and 94KHz , and vertical frequencies between 56Hz and 85Hz. This color monitor displays sharp and brilliant images of text and graphics with a maximum resolution up to 1600x1200 pixels.

The monitor has 19 factory-preset modes as indicated in the following table:

Item	H.Freq. (KHz)	Mode	Resolution	V.Freq. (Hz)
1	31.469	IBM VGA 10H	640x350	70.086
2	31.469	IBM VGA 3H	720x400	70.087
3	31.469	IBM VGA 12H	640x480	59.940
4	35.000	MACINTOSH	640x480	67.000
5	37.500	VESA	640x480	75.000
6	35.156	VESA	800x600	56.250
7	37.879	VESA	800x600	60.317
8	46.875	VESA	800x600	75.000
9	49.700	MACINTOSH	832x624	75.000
10	48.363	VESA	1024x768	60.004
11	60.023	VESA	1024x768	75.029
12	68.700	MACINTOSH	1152x870	75.000
13	71.810	SUN WS	1152x900	76.150
14	63.981	VESA	1280x1024	60.020
15	79.976	VESA	1280x1024	75.025
16	91.1	VESA	1280x1024	85
17	75.0	VESA	1600x1200	60
18	93.8	VESA	1600x1200	75
19	31.250	TV-PAL	688x556	50.

3. Test Equipment

Test equipment used for line Conducted and Radiated emissions as following.
All equipment were calibrated according to ANSI C63.4-1992 and ISO-9000 requirement unless otherwise specified.

Traceability to R.O.C. and international standards is assured by using calibrated all equipment.

- For Conducted Emissions Test:

Test Equipment	Model No.	Serial No.	Last Calibrate	Next Calibrate
Spectrum	HP8568B	2928A04640	09/02/2002	09/02/2003
EMI Receiver	R & S ESVS30	841977/006	06/13/2002	06/13/2003
LISN	EMCO 3825/2	9311-2153	06/13/2002	06/13/2003
LISN	EMCO 3825/2	9311-2154	06/13/2002	06/13/2003
RF Cable	8-meter	N/A	05/29-2002	05/29/2003

- For Radiated Emissions Test:

Test Equipment	Model No.	Serial No.	Last Calibrate	Next Calibrate
Spectrum	HP8568B	2928A04640	09/02/2002	09/02/2003
RF Preselector	HP85685A	2620A00338	09/02/2002	09/02/2003
QP Adapter	HP85650A	2811A01324	09/02/2002	09/02/2003
EMI Receiver	HP85460A	3441A00199	09/11/2001	09/11/2002
RFI Filter Section	HP85460A	3330A00177	09/11/2001	09/11/2002
EMI Receiver	R & S ESVS30	841977/006	06/13/2002	06/13/2003
Biconical Antenna	EMCO 3110B	3222	06/04/2002	06/04/2003
Biconical Antenna	EMCO 3110B	3224	06/04/2002	06/04/2003
Log-Periodic Antenna	EMCO 3146A	1424	06/04/2002	06/04/2003
Log-Periodic Antenna	EMCO 3146A	1425	06/04/2002	06/04/2003
Turn Table	EMCO 1060	1068	05/27/2002	05/27/2003
Antenna Tower	EMCO 1050	1113	05/27/2002	05/27/2003
RF Cable	M17/75-RG214-NE	N/A	05/27/2002	05/27/2003

4. Test Configuration of EUT and Peripherals

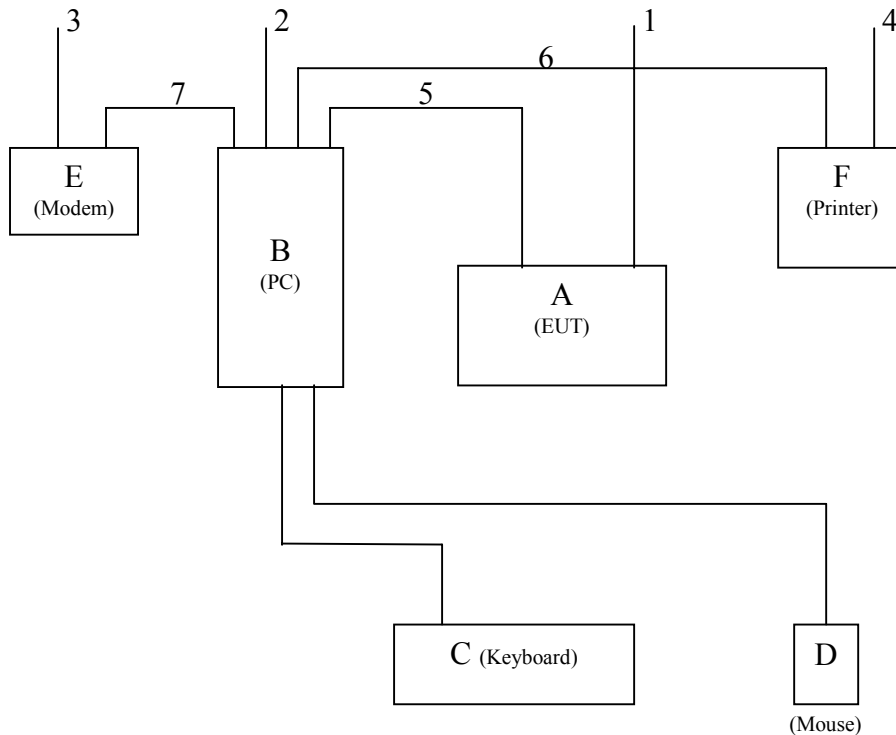
The system was configured for testing in a typical fashion (as a customer would normally use it) according to ANSI C63.4-1992, please see the photographs for detail. For system measurement, the EUT "P4831" were connected to:

	Description	Brand/ Model No.	Serial No.	FCC ID	Remark
A	Monitor	HP P4831	TW233PA001	A3KM110	EUT
B	PC	Compaq ENC P866	5K15FXHZ2013	FCC Logo	
C	Keyboard	Compaq KB-9963	B26950GGALP13Q	FCC Logo	
D	Mouse	Compaq M-S48a		JNZ201213	
E	Modem	Hayes 231AA	A22231081770	BFJ9D9308US	
F	Printer	HP 2225C	2934S55406	DSI6XU2225	

Connected Cables

No.	Description	Manufacturer	Length	Shielded	Remark
1	Power Cord	Long Shine	1.8 meters	No	for EUT
2	Power Cord	Acer	1.8 meters	No	for PC
3	Power Cord	Aceex	2.0 meters	No	for Modem
4	Power Cord	HP	1.8 meters	No	for Printer
5	Video Cable	Long Shine	1.5 meters	Yes	
6	Printer Cable	HP	1.8 meters	Yes	
7	Modem Cable	Aceex	1.5 meters	Yes	

System Block Diagram of Test Configuration



5. Test Procedure

Test was performed by:

PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.
CONSUMER ELECTRONICS DIVISION
- EMC LAB

5, Tze Chiang 1 Road, Chungli Industrial Park
P.O. Box 123, Chungli, Taoyuan, Taiwan
Tel : 886-3-4549862 Fax : 886-3-4549887
Internet: ronnie.yang@philips.com

The test was performed in accordance with ANSI C63.4-1992, “AMERICAN NATIONAL STANDARD FOR MEASUREMENT OF RADIO-NOISE EMISSION FROM LOW-VOLTAGE ELECTRICAL AND ELECTRONIC EQUIPMENT IN THE RANGE OF 9KHz TO 40GHz”

Both conducted and radiated testing were performed according to the procedure in ANSI C63.4-1992. Conducted testing was performed in screen room and radiated testing was performed in open site at an antenna to EUT distance of 3-meter on horizontal and vertical polarization.

First, pre-scan all modes in screen room then select **2 higher modes** (worst case) were tested and reported.

The line conductive interference was tested with 110VAC and 220VAC receptively.

Unshielded power cord was used during test.

[D-sub I/F cable with two ferrite cores was used.](#)

[DVI I/F cable with two ferrite cores was.](#)

Tested and reported modes as following:

Test Item	File No.	Resolution	Frequencies	I/F Cable
Conducted	EMI02-045-C	1600x1200	93.7KHz/75Hz	D-sub & DVI
		1280x1024	91.1KHz/85Hz	D-sub
Radiated	EMI02-045-R	1600x1200	93.7KHz/75Hz	D-sub & DVI
		1280x1024	91.1KHz/85Hz	D-sub

Set up the EUT and all peripherals as chapter 6 of ANSI C63.4-1992 for AC power line conducted emissions testing and radiated emissions testing.

Turn on the power of EUT and all peripherals, select an appropriate displaying mode using the “setup” software. Then run an EMI test program “HTEST.EMI” as a basic software to execute the EUT operating under test. A pattern of scrolling H’s should be displayed on the monitor.

Step 1 : Run the "HTEST.EMI" on personal computer then sends "H" character to monitor continuously until full screen.

Step 2 : Personal computer sends a complete line of continuously repeating "H" to HP 2225C printer.

Step 3 : Personal computer sends a file of "H" pattern to floppy disk then read a file of "H" pattern from floppy disk.

Step 4 : Personal computer sends a file of "H" pattern to hard disk then read a file of "H" pattern from hard disk.

Step 5 : Personal computer sends a file of "H" pattern to USRobotics 268 modem.

Step 6 : Return to step 1

All data in this report are "PEAK" value within 15dB margin unless otherwise noted.

6. Measurement Uncertainty

The system uncertainty listed below are based on the instrument absolute specifications, and do not include uncertainties of the equipment under test.

Uncertainty for Radiated Emissions Test at 3 meters Test Site.

Source of Measurement Uncertainty	Uncertainty/dB
Antenna factor calibration	+/-2.0
Cable loss calibration	+/-0.5
Receiver specification	+/-1.0
Antenna position ver.	+/-2.0
Measurement distance ver.	+/-0.5
Site imperfections	+/-2.0
Mismatch	+/-1.1
System repeatability	+/-0.5

Uncertainty for Conducted Emissions Test at 3 meters Test Site.

Source of Measurement Uncertainty	Uncertainty/dB
LISN specification	+/-2.0
Cable loss calibration	+/-0.5
Receiver specification	+/-1.0
Pulse limiter Spec.	+/-0.3
Measurement distance ver.	+/-0.5
Site imperfections	+/-2.0
System repeatability	+/-0.5

FCC Part 15

EUT powered on with scrolling “H” pattern.

Class B (dBUv) QP

48.0

48.0

Passed FCC Class B Limits

The following option may be employed if the conducted emissions exceed the limits, as appropriate, when measured using instrumentation employing a quasi-peak detector function: If the level of the emission measured using the quasi-peak instrumentation is 6dB, or, more higher than the level of the same emission measured with instrumentation having an average detector and a 9KHz minimum bandwidth, that emission is considered broadband and the level obtained with the quasi-peak detector may be reduced by 13dB for comparison to the limits.

Remark:

: 24 Aug., 2002 to 26 Aug., 2002

: C.C.Wu

For detail measurement results see next pages.

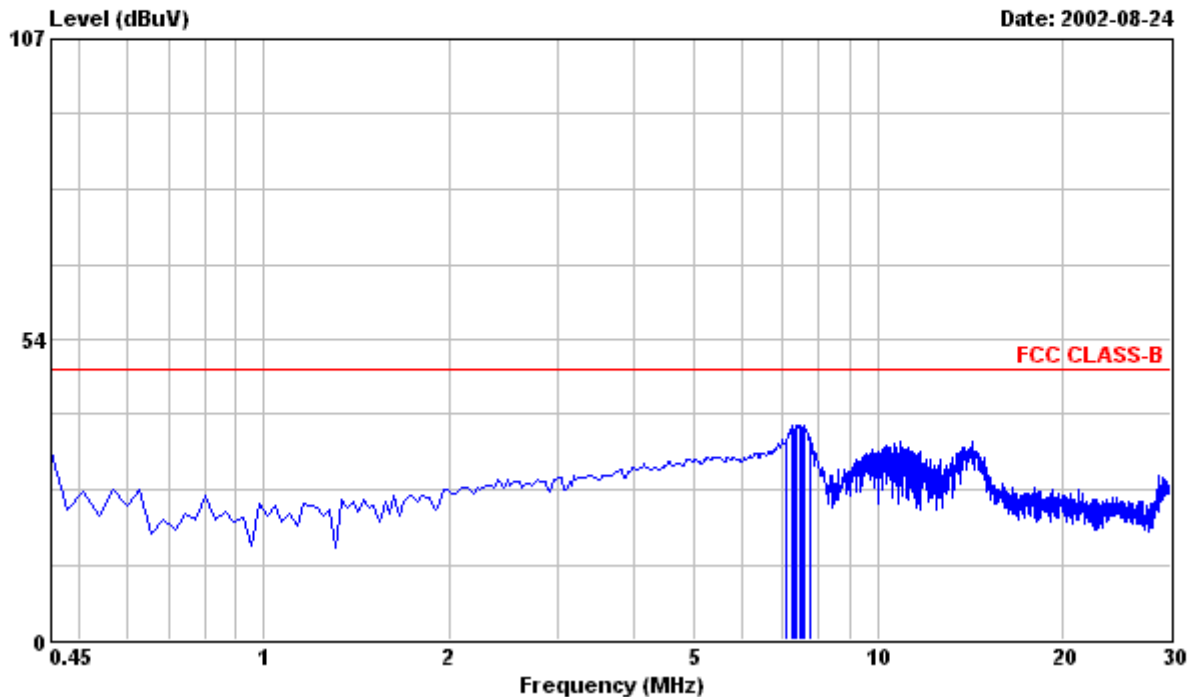


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Philips Electronics Industries (Taiwan)., Ltd.
No.5, Tze Chiang 1 Road, Chungli Industrial Park,
Chungli, Taiwan, R.O.C.
Tel:+886-3-4549862 Fax:+886-3-4549887

Data#: 1

File#: C:\Program Files\em3\EMI02-045-C.emi



Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L1 LINE
EUT : HP P4831 Serial No:TW233PA001
Power : 120VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. T/R MODEL LG PANEL,RUN WIN-FCC
: "H" PATTERN.
: 3. EXTRA S-VIDEO , CVBS I/P CABLE WERE
: CONNECTED WITH 2 DUMMY LOAD.
: 4. 1600x1200/75Hz 93.7KHz MODE W/ATI
: RADEON VE DDR VIDEO CARD &
: D-SUB I/F CABLE WAS TESTED.

Frequency MHz	Peak Reading dBuV	Limit dBuV	Factor dB	Emission Level dBuV	Over Limit * LINE dBuV
7.069	35.80	48.00	0.00	35.80	-12.20
7.247	38.10	48.00	0.00	38.10	-9.90
7.306	37.40	48.00	0.00	37.40	-10.60
7.365	38.30	48.00	0.00	38.30	-9.70
7.483	38.00	48.00	0.00	38.00	-10.00
7.542	37.90	48.00	0.00	37.90	-10.10
7.601	38.10	48.00	0.00	38.10	-9.90
7.778	35.90	48.00	0.00	35.90	-12.10

Remarks: 1. All Readings are Peak .
2. Emission Level (dBuV) = Factor (dB) + Meter Reading (dBuV)
3. Factor (dB/m) = LISN Loss (dB) + Cable Loss (dB)

Tested by : C.C.Wu

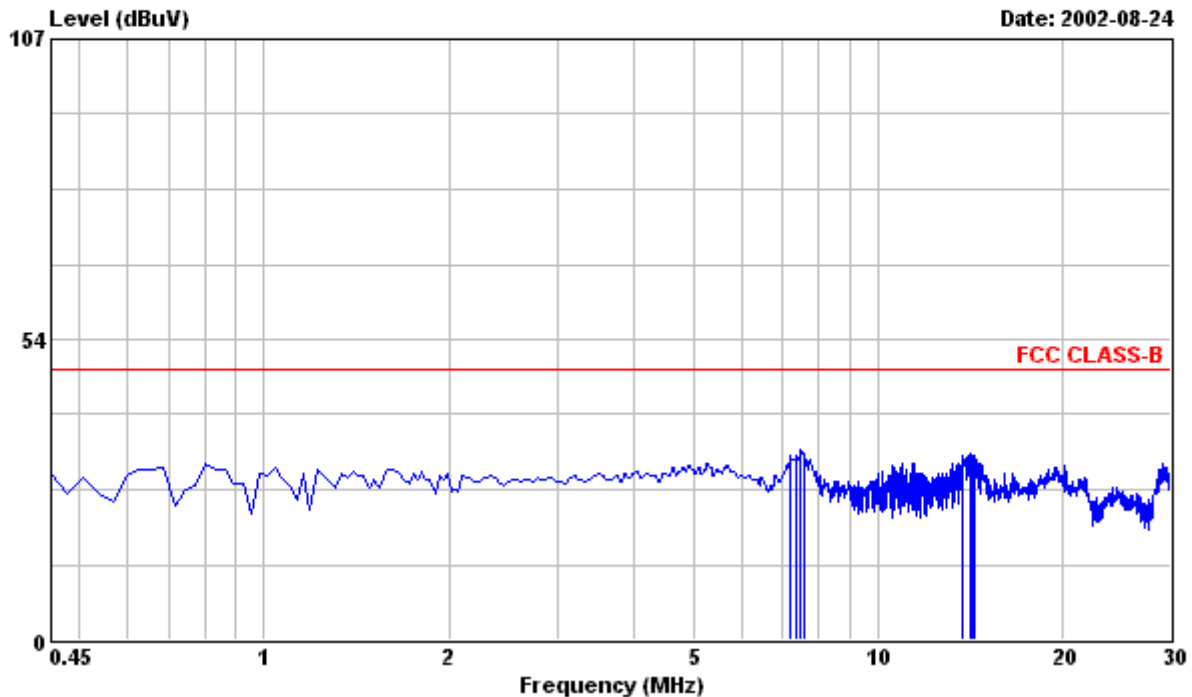


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Tel:+886-3-4549862 Fax:+886-3-4549887

Data#: 2

File#: C:\Program Files\em3\EMI02-045-C.emi



Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L2 NEUTRAL
EUT : HP P4831 Serial No:TW233PA001
Power : 120VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. T/R MODEL LG PANEL,RUN WIN-FCC
: "H" PATTERN.
: 3. EXTRA S-VIDEO , CVBS I/P CABLE WERE
: CONNECTED WITH 2 DUMMY LOAD.
: 4. 1600x1200/75Hz 93.7KHz MODE W/ATI
: RADEON VE DDR VIDEO CARD &
: D-SUB I/F CABLE WAS TESTED.

Frequency MHz	Peak Reading dBuV	Limit dBuV	Factor dB	Emission Level dBuV	Over Limit dBuV	※ NEUTRAL
7.187	32.70	48.00	0.00	32.70	-15.30	
7.365	32.90	48.00	0.00	32.90	-15.10	
7.483	34.00	48.00	0.00	34.00	-14.00	
7.601	33.10	48.00	0.00	33.10	-14.90	
13.748	32.98	48.00	0.00	32.98	-15.02	
14.102	33.09	48.00	0.00	33.09	-14.91	
14.279	32.69	48.00	0.00	32.69	-15.31	
14.398	32.79	48.00	0.00	32.79	-15.21	

Remarks: 1. All Readings are Peak .
2. Emission Level (dBuV) = Factor (dB) + Meter Reading (dBuV)
3. Factor (dB/m) = LISN Loss (dB) + Cable Loss (dB)

Tested by : C.C.Wu

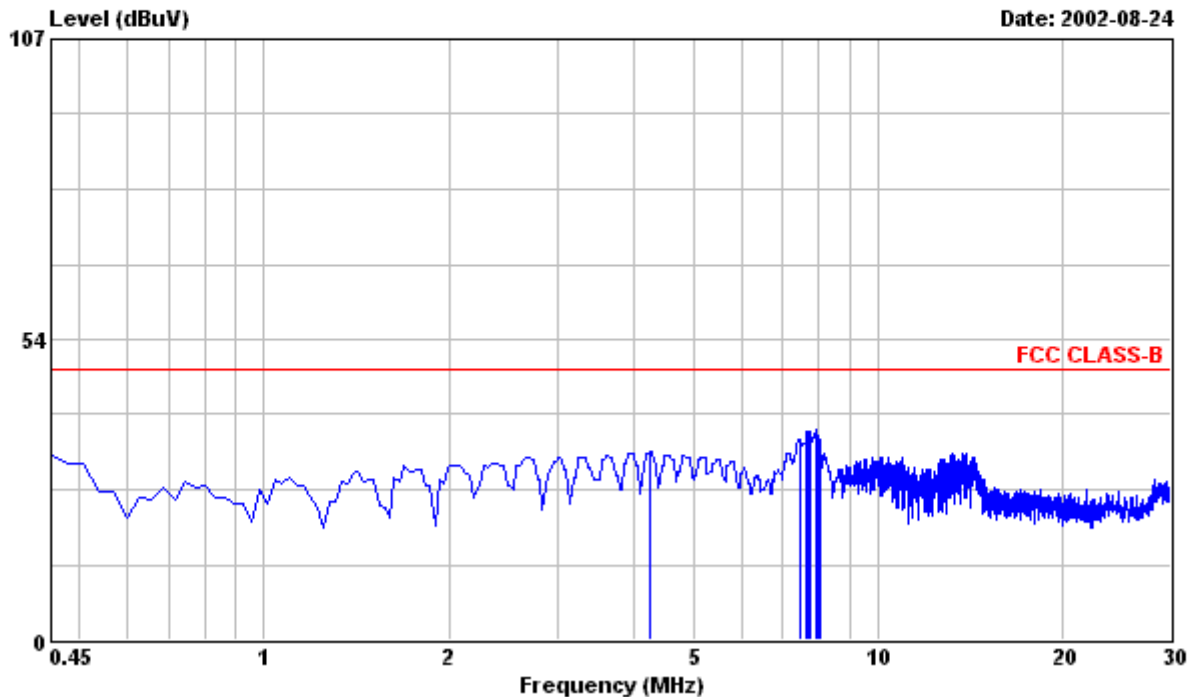


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No.5, Tze Chiang 1 Road, Chungli Industrial Park,
Chungli, Taiwan, R.O.C.
Tel:+886-3-4549862 Fax:+886-3-4549887

Data#: 3

File#: C:\Program Files\em3\EMI02-045-C.emi



Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L1 LINE
EUT : HP P4831 Serial No:TW233PA001
Power : 220VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. T/R MODEL LG PANEL,RUN WIN-FCC
: "H" PATTERN.
: 3. EXTRA S-VIDEO , CVBS I/P CABLE WERE
: CONNECTED WITH 2 DUMMY LOAD.
: 4. 1600x1200/75Hz 93.7KHz MODE W/ATI
: RADEON VE DDR VIDEO CARD &
: D-SUB I/F CABLE WAS TESTED.

Frequency MHz	Peak Reading dBuV	Limit dBuV	Factor dB	Emission Level dBuV	Over Limit * LINE dBuV
4.262	33.37	48.00	0.00	33.37	-14.63
7.483	35.80	48.00	0.00	35.80	-12.20
7.660	37.10	48.00	0.00	37.10	-10.90
7.719	37.20	48.00	0.00	37.20	-10.80
7.778	37.10	48.00	0.00	37.10	-10.90
7.956	37.30	48.00	0.00	37.30	-10.70
8.015	36.30	48.00	0.00	36.30	-11.70
8.074	35.61	48.00	0.00	35.61	-12.39

Remarks: 1. All Readings are Peak .
2. Emission Level (dBuV) = Factor (dB) + Meter Reading (dBuV)
3. Factor (dB/m) = LISN Loss (dB) + Cable Loss (dB)

Tested by : C.C.Wu

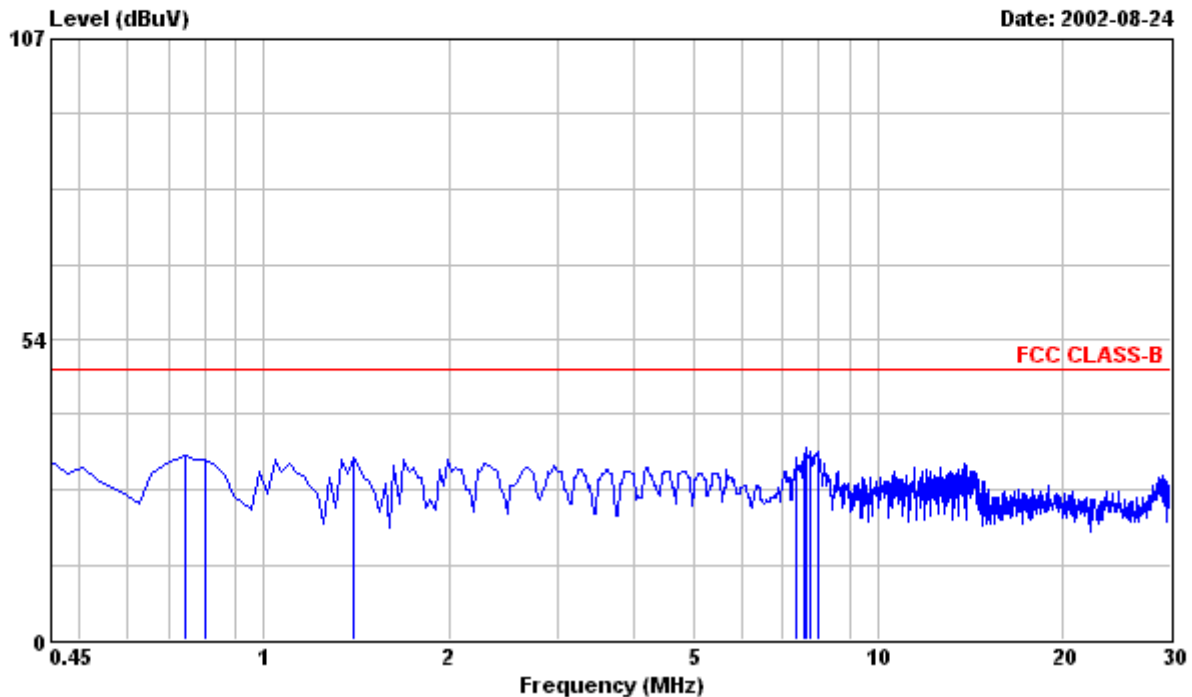


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Data#: 4

File#: C:\Program Files\em3\EMI02-045-C.emi



Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L2 NEUTRAL
EUT : HP P4831 Serial No:TW233PA001
Power : 220VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. T/R MODEL LG PANEL,RUN WIN-FCC
: "H" PATTERN.
: 3. EXTRA S-VIDEO , CVBS I/P CABLE WERE
: CONNECTED WITH 2 DUMMY LOAD.
: 4. 1600x1200/75Hz 93.7KHz MODE W/ATI
: RADEON VE DDR VIDEO CARD &
: D-SUB I/F CABLE WAS TESTED.

Frequency MHz	Peak Reading dBuV	Limit dBuV	Factor dB	Emission Level dBuV	Over Limit dBuV	※ NEUTRAL
0.746	32.93	48.00	0.00	32.93	-15.07	
0.805	32.25	48.00	0.00	32.25	-15.75	
1.396	32.50	48.00	0.00	32.50	-15.50	
7.335	32.50	48.00	0.00	32.50	-15.50	
7.572	33.30	48.00	0.00	33.30	-14.70	
7.631	34.20	48.00	0.00	34.20	-13.80	
7.778	33.40	48.00	0.00	33.40	-14.60	
8.015	33.50	48.00	0.00	33.50	-14.50	

Remarks: 1. All Readings are Peak .
2. Emission Level (dBuV) = Factor (dB) + Meter Reading (dBuV)
3. Factor (dB/m) = LISN Loss (dB) + Cable Loss (dB)

Tested by : C.C.Wu

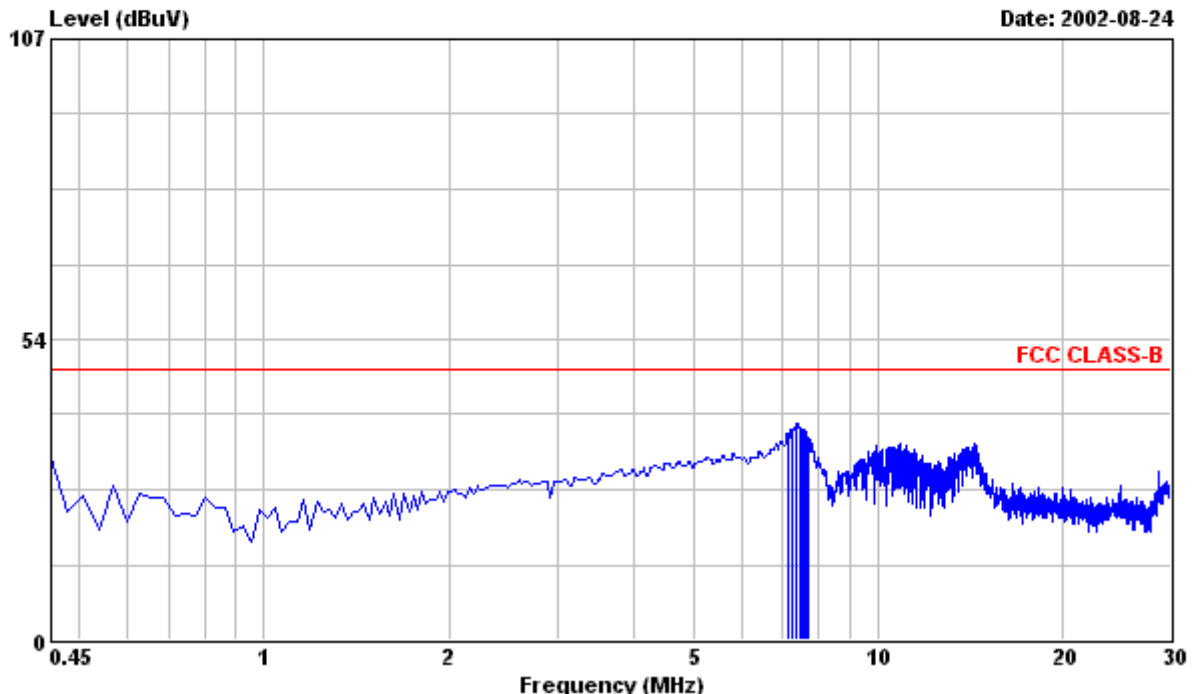


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Data#: 5

File#: C:\Program Files\em3\EMI02-045-C.emi



Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L1 LINE
EUT : HP P4831 Serial No:TW233PA001
Power : 120VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. T/R MODEL LG PANEL,RUN WIN-FCC
: "H" PATTERN.
: 3. EXTRA S-VIDEO , CVBS I/P CABLE WERE
: CONNECTED WITH 2 DUMMY LOAD.
: 4. 1280x1024/85Hz 91.1KHz MODE W/ATI
: RADEON VE DDR VIDEO CARD &
: D-SUB I/F CABLE WAS TESTED.

Frequency MHz	Peak Reading dBuV	Limit dBuV	Factor dB	Emission Level dBuV	Over Limit * LINE dBuV
7.128	36.60	48.00	0.00	36.60	-11.40
7.247	37.60	48.00	0.00	37.60	-10.40
7.365	38.50	48.00	0.00	38.50	-9.50
7.483	37.90	48.00	0.00	37.90	-10.10
7.542	37.30	48.00	0.00	37.30	-10.70
7.601	37.30	48.00	0.00	37.30	-10.70
7.660	37.00	48.00	0.00	37.00	-11.00
7.719	36.00	48.00	0.00	36.00	-12.00

Remarks: 1. All Readings are Peak .
2. Emission Level (dBuV) = Factor (dB) + Meter Reading (dBuV)
3. Factor (dB/m) = LISN Loss (dB) + Cable Loss (dB)

Tested by : C.C.Wu

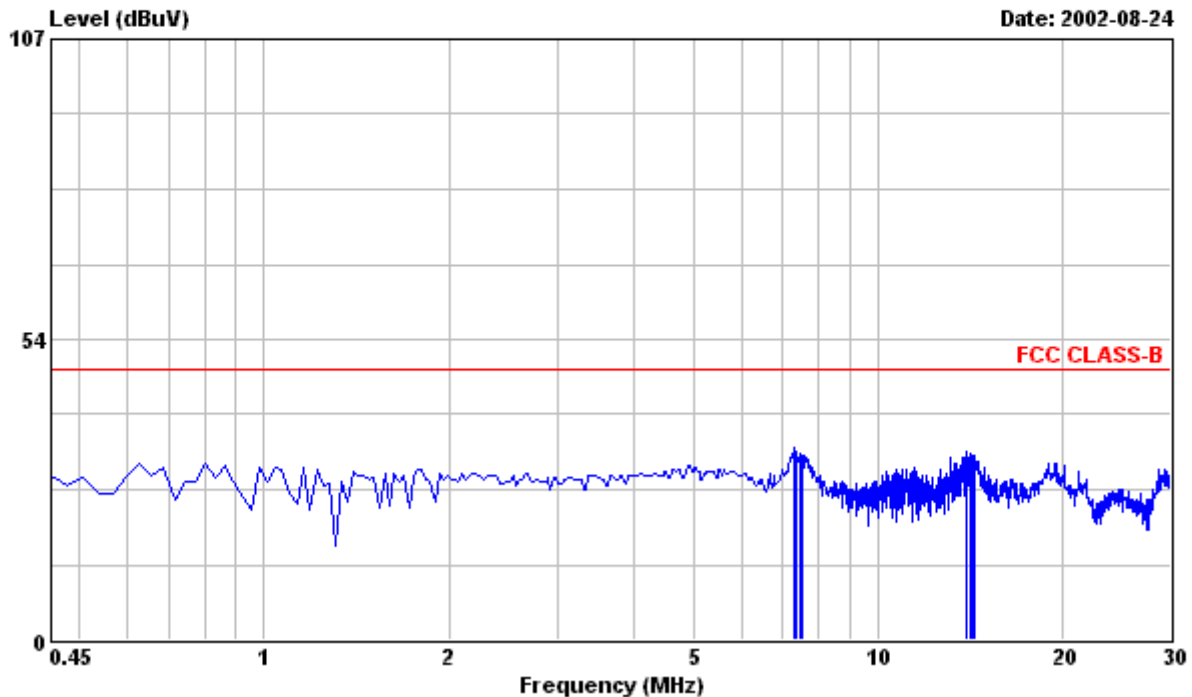


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Data#: 6

File#: C:\Program Files\em3\EMI02-045-C.emi



Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L2 NEUTRAL
EUT : HP P4831 Serial No:TW233PA001
Power : 120VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. T/R MODEL LG PANEL,RUN WIN-FCC
: "H" PATTERN.
: 3. EXTRA S-VIDEO , CVBS I/P CABLE WERE
: CONNECTED WITH 2 DUMMY LOAD.
: 4. 1280x1024/85Hz 91.1KHz MODE W/ATI
: RADEON VE DDR VIDEO CARD &
: D-SUB I/F CABLE WAS TESTED.

Frequency MHz	Peak Reading dBuV	Limit dBuV	Factor dB	Emission Level dBuV	Over Limit dBuV	※ NEUTRAL
7.306	34.10	48.00	0.00	34.10	-13.90	
7.365	33.70	48.00	0.00	33.70	-14.30	
7.483	33.30	48.00	0.00	33.30	-14.70	
7.542	32.90	48.00	0.00	32.90	-15.10	
13.925	33.58	48.00	0.00	33.58	-14.42	
14.102	33.19	48.00	0.00	33.19	-14.81	
14.279	32.89	48.00	0.00	32.89	-15.11	
14.339	32.89	48.00	0.00	32.89	-15.11	

Remarks: 1. All Readings are Peak .
2. Emission Level (dBuV) = Factor (dB) + Meter Reading (dBuV)
3. Factor (dB/m) = LISN Loss (dB) + Cable Loss (dB)

Tested by : C.C.Wu

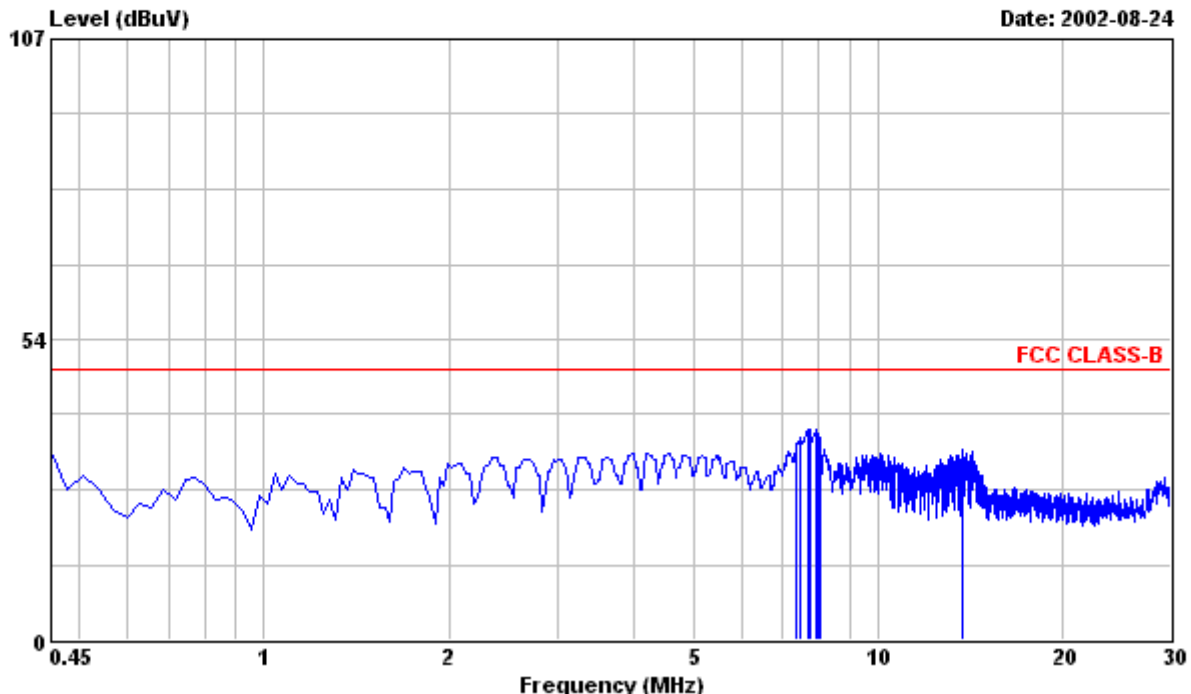


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Data#: 7

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Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L1 LINE
EUT : HP P4831 Serial No:TW233PA001
Power : 220VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. T/R MODEL LG PANEL,RUN WIN-FCC
: "H" PATTERN.
: 3. EXTRA S-VIDEO , CVBS I/P CABLE WERE
: CONNECTED WITH 2 DUMMY LOAD.
: 4. 1280x1024/85Hz 91.1KHz MODE W/ATI
: RADEON VE DDR VIDEO CARD &
: D-SUB I/F CABLE WAS TESTED.

Frequency MHz	Peak Reading dBuV	Limit dBuV	Factor dB	Emission Level dBuV	Over Limit * LINE dBuV
7.335	35.00	48.00	0.00	35.00	-13.00
7.483	35.90	48.00	0.00	35.90	-12.10
7.719	37.50	48.00	0.00	37.50	-10.50
7.778	37.30	48.00	0.00	37.30	-10.70
7.956	37.60	48.00	0.00	37.60	-10.40
8.015	36.80	48.00	0.00	36.80	-11.20
8.074	36.01	48.00	0.00	36.01	-11.99
13.748	33.88	48.00	0.00	33.88	-14.12

Remarks: 1. All Readings are Peak .
2. Emission Level (dBuV) = Factor (dB) + Meter Reading (dBuV)
3. Factor (dB/m) = LISN Loss (dB) + Cable Loss (dB)

Tested by : C.C.Wu

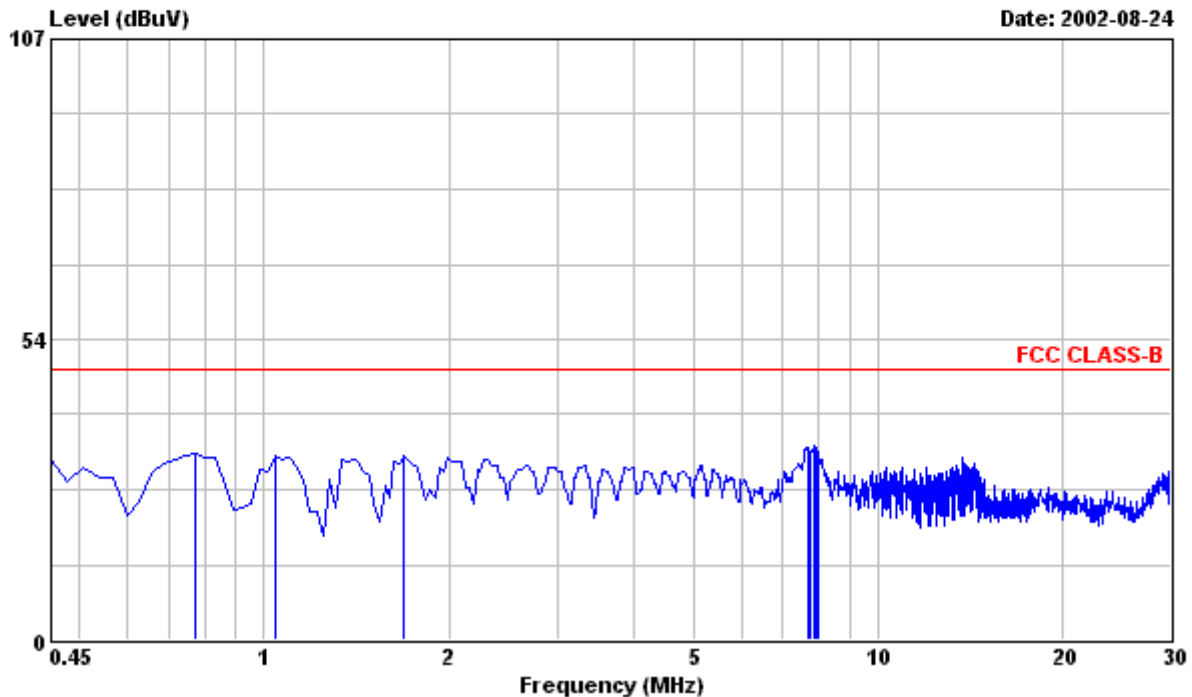


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Philips Electronics Industries (Taiwan)., Ltd.
No.5, Tze Chiang 1 Road, Chungli Industrial Park,
Chungli, Taiwan, R.O.C.
Tel:+886-3-4549862 Fax:+886-3-4549887

Data#: 8

File#: C:\Program Files\em3\EMI02-045-C.emi



Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L2 NEUTRAL
EUT : HP P4831 Serial No:TW233PA001
Power : 220VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. T/R MODEL LG PANEL,RUN WIN-FCC
: "H" PATTERN.
: 3. EXTRA S-VIDEO , CVBS I/P CABLE WERE
: CONNECTED WITH 2 DUMMY LOAD.
: 4. 1280x1024/85Hz 91.1KHz MODE W/ATI
: RADEON VE DDR VIDEO CARD &
: D-SUB I/F CABLE WAS TESTED.

Frequency MHz	Peak Reading dBuV	Limit dBuV	Factor dB	Emission Level dBuV	Over Limit dBuV	※ NEUTRAL
0.775	33.04	48.00	0.00	33.04	-14.96	
1.041	32.90	48.00	0.00	32.90	-15.10	
1.691	32.90	48.00	0.00	32.90	-15.10	
7.719	34.30	48.00	0.00	34.30	-13.70	
7.778	33.70	48.00	0.00	33.70	-14.30	
7.897	34.70	48.00	0.00	34.70	-13.30	
7.956	34.10	48.00	0.00	34.10	-13.90	
8.015	33.50	48.00	0.00	33.50	-14.50	

Remarks: 1. All Readings are Peak .
2. Emission Level (dBuV) = Factor (dB) + Meter Reading (dBuV)
3. Factor (dB/m) = LISN Loss (dB) + Cable Loss (dB)

Tested by : C.C.Wu

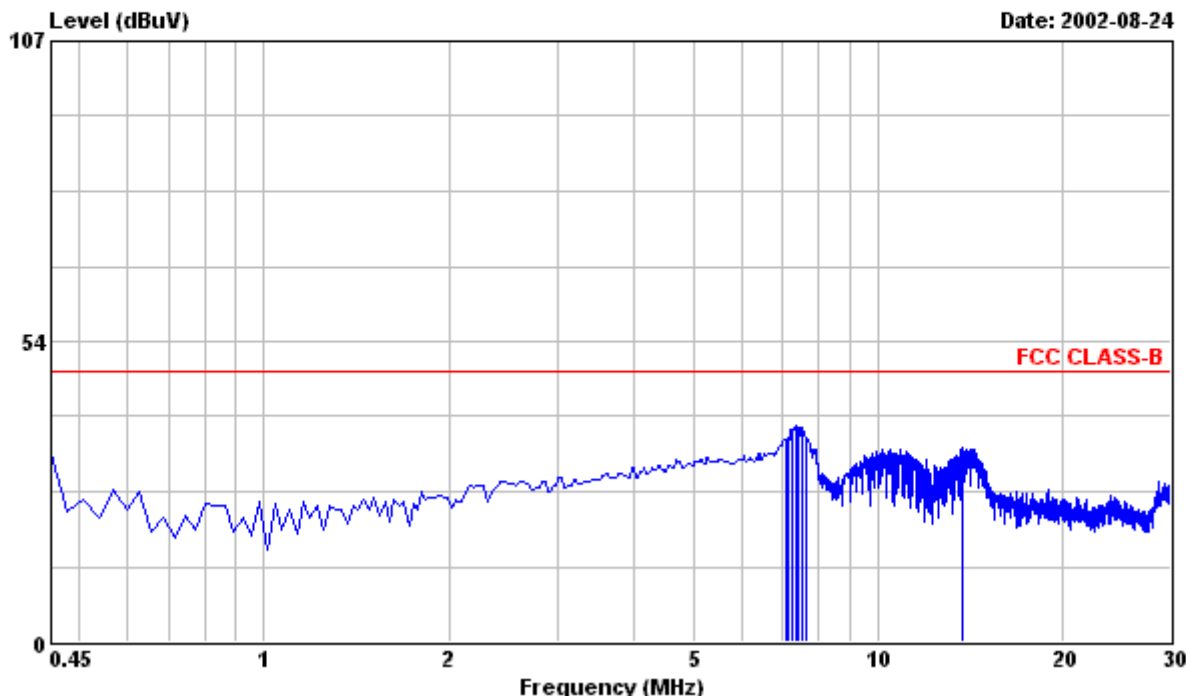


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No.5, Tze Chiang 1 Road, Chungli Industrial Park,
Chungli, Taiwan, R.O.C.
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Data#: 9

File#: C:\Program Files\em3\EMI02-045-C.emi



Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L1 LINE
EUT : HP P4831 Serial No:TW233PA001
Power : 120VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. T/R MODEL LG PANEL,RUN WIN-FCC
: "H" PATTERN.
: 3. EXTRA S-VIDEO , CVBS I/P CABLE WERE
: CONNECTED WITH 2 DUMMY LOAD.
: 4. 1600x1200/75Hz 93.7KHz MODE W/ATI
: RADEON VE DDR VIDEO CARD &
: DVI I/F CABLE WAS TESTED.

Frequency MHz	Peak Reading dBuV	Limit dBuV	Factor dB	Emission Level dBuV	Over Limit dBuV	※ LINE
7.069	36.20	48.00	0.00	36.20	-11.80	
7.128	36.50	48.00	0.00	36.50	-11.50	
7.247	37.80	48.00	0.00	37.80	-10.20	
7.365	38.40	48.00	0.00	38.40	-9.60	
7.424	38.00	48.00	0.00	38.00	-10.00	
7.542	38.10	48.00	0.00	38.10	-9.90	
7.660	36.50	48.00	0.00	36.50	-11.50	
13.748	34.58	48.00	0.00	34.58	-13.42	

Remarks: 1. All Readings are Peak .
2. Emission Level (dBuV) = Factor (dB) + Meter Reading (dBuV)
3. Factor (dB/m) = LISN Loss (dB) + Cable Loss (dB)

Tested by : C.C.Wu

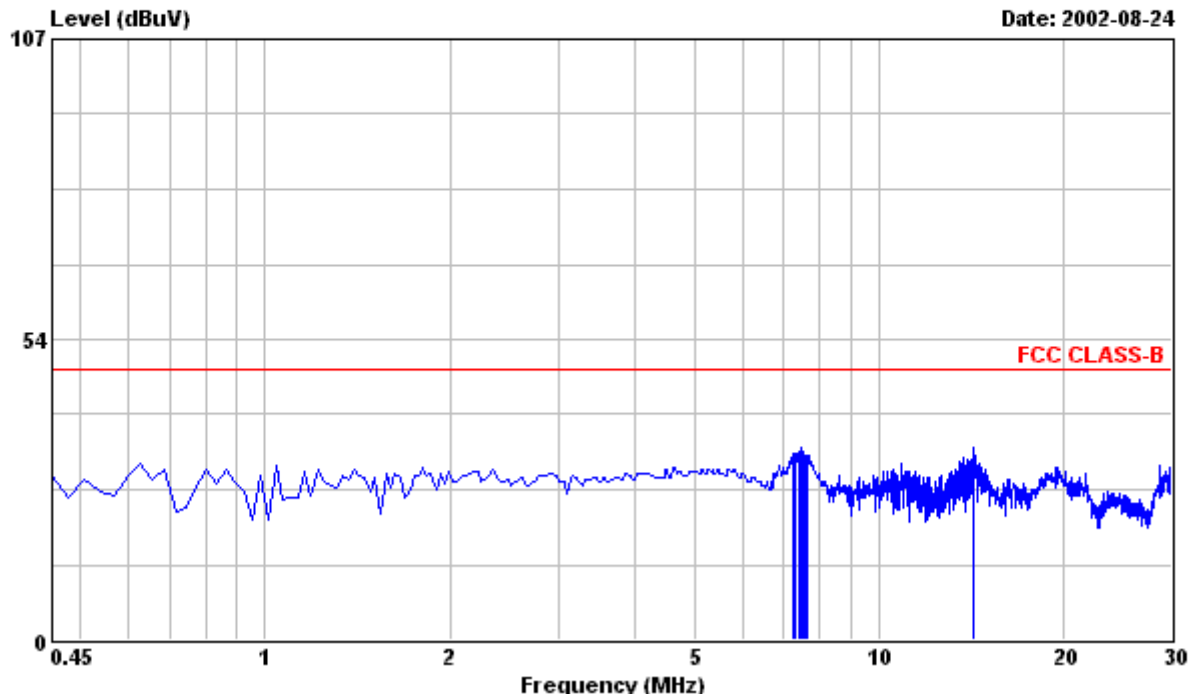


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No.5, Tze Chiang 1 Road, Chungli Industrial Park,
Chungli, Taiwan, R.O.C.
Tel:+886-3-4549862 Fax:+886-3-4549887

Data#: 10

File#: C:\Program Files\em3\EMI02-045-C.emi



Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L2 NEUTRAL
EUT : HP P4831 Serial No:TW233PA001
Power : 120VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. T/R MODEL LG PANEL,RUN WIN-FCC
: "H" PATTERN.
: 3. EXTRA S-VIDEO , CVBS I/P CABLE WERE
: CONNECTED WITH 2 DUMMY LOAD.
: 4. 1600x1200/75Hz 93.7KHz MODE W/ATI
: RADEON VE DDR VIDEO CARD &
: DVI I/F CABLE WAS TESTED.

Frequency MHz	Peak Reading dBuV	Limit dBuV	Factor dB	Emission Level dBuV	Over Limit dBuV	※ NEUTRAL
7.247	33.00	48.00	0.00	33.00	-15.00	
7.306	33.30	48.00	0.00	33.30	-14.70	
7.424	33.70	48.00	0.00	33.70	-14.30	
7.483	34.10	48.00	0.00	34.10	-13.90	
7.542	33.40	48.00	0.00	33.40	-14.60	
7.601	32.90	48.00	0.00	32.90	-15.10	
7.660	32.80	48.00	0.00	32.80	-15.20	
14.279	34.19	48.00	0.00	34.19	-13.81	

Remarks: 1. All Readings are Peak .
2. Emission Level (dBuV) = Factor (dB) + Meter Reading (dBuV)
3. Factor (dB/m) = LISN Loss (dB) + Cable Loss (dB)

Tested by : C.C.Wu

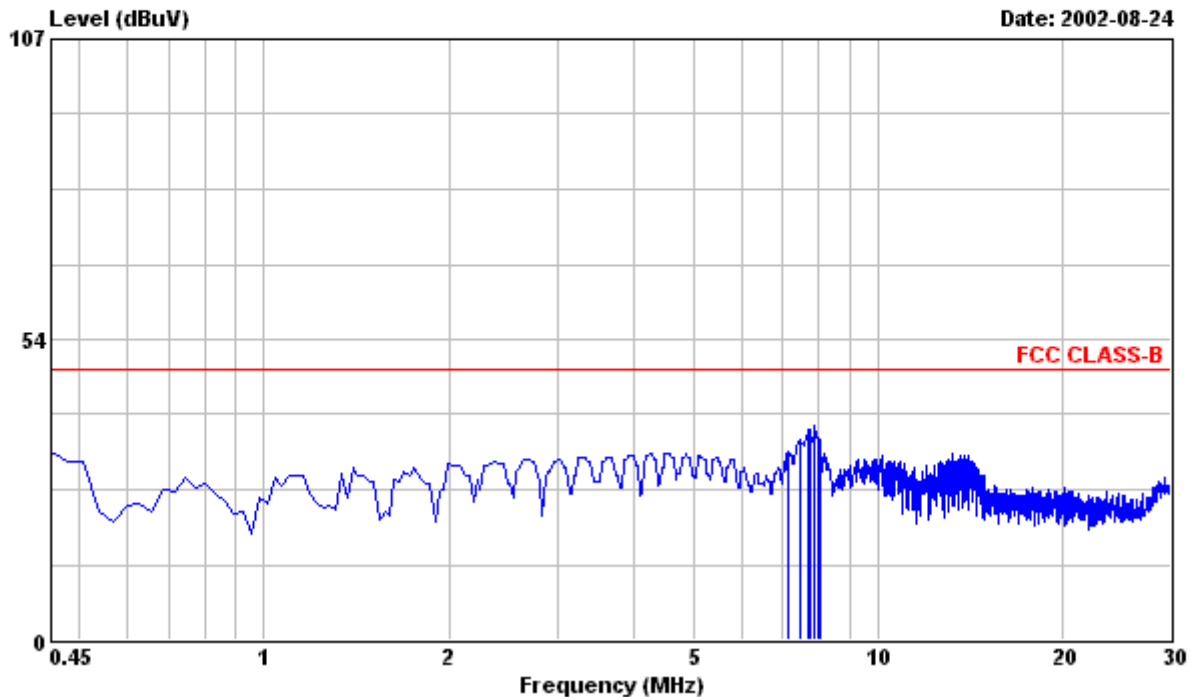


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No.5, Tze Chiang 1 Road, Chungli Industrial Park,
Chungli, Taiwan, R.O.C.
Tel:+886-3-4549862 Fax:+886-3-4549887

Data#: 11

File#: C:\Program Files\em3\EMI02-045-C.emi



Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L1 LINE
EUT : HP P4831 Serial No:TW233PA001
Power : 220VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. T/R MODEL LG PANEL,RUN WIN-FCC
: "H" PATTERN.
: 3. EXTRA S-VIDEO , CVBS I/P CABLE WERE
: CONNECTED WITH 2 DUMMY LOAD.
: 4. 1600x1200/75Hz 93.7KHz MODE W/ATI
: RADEON VE DDR VIDEO CARD &
: DVI I/F CABLE WAS TESTED.

Frequency MHz	Peak Reading dBuV	Limit dBuV	Factor dB	Emission Level dBuV	Over Limit dBuV	※ LINE
0.450	33.50	48.00	0.00	33.50	-14.50	
7.158	33.70	48.00	0.00	33.70	-14.30	
7.483	35.70	48.00	0.00	35.70	-12.30	
7.719	37.50	48.00	0.00	37.50	-10.50	
7.778	37.30	48.00	0.00	37.30	-10.70	
7.897	38.20	48.00	0.00	38.20	-9.80	
8.015	36.00	48.00	0.00	36.00	-12.00	
8.074	35.81	48.00	0.00	35.81	-12.19	

Remarks: 1. All Readings are Peak .
2. Emission Level (dBuV) = Factor (dB) + Meter Reading (dBuV)
3. Factor (dB/m) = LISN Loss (dB) + Cable Loss (dB)

Tested by : C.C.Wu

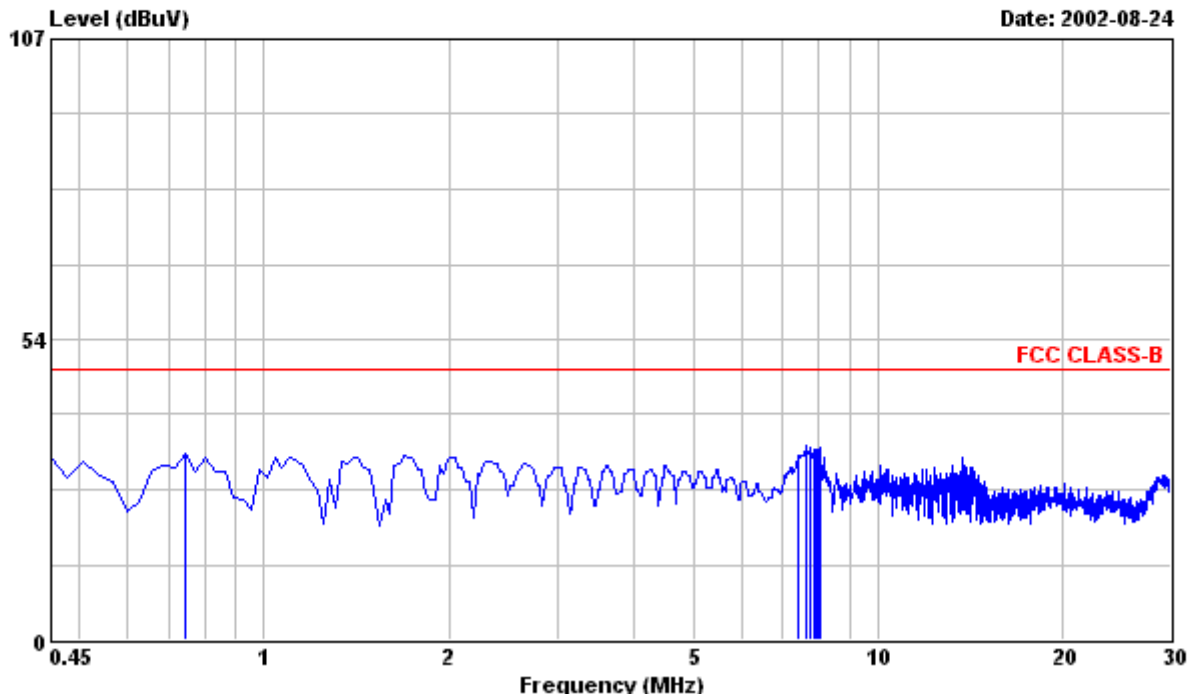


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No.5, Tze Chiang 1 Road, Chungli Industrial Park,
Chungli, Taiwan, R.O.C.
Tel:+886-3-4549862 Fax:+886-3-4549887

Data#: 12

File#: C:\Program Files\em3\EMI02-045-C.emi



Site : PHILIPS EMI Shielding Room
Condition : FCC CLASS-B FCC_LCI_L2 NEUTRAL
EUT : HP P4831 Serial No:TW233PA001
Power : 220VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. T/R MODEL LG PANEL,RUN WIN-FCC
: "H" PATTERN.
: 3. EXTRA S-VIDEO , CVBS I/P CABLE WERE
: CONNECTED WITH 2 DUMMY LOAD.
: 4. 1600x1200/75Hz 93.7KHz MODE W/ATI
: RADEON VE DDR VIDEO CARD &
: DVI I/F CABLE WAS TESTED.

Frequency MHz	Peak Reading dBuV	Limit dBuV	Factor dB	Emission Level dBuV	Over Limit dBuV	※ NEUTRAL
0.746	33.03	48.00	0.00	33.03	-14.97	
7.424	32.80	48.00	0.00	32.80	-15.20	
7.660	34.60	48.00	0.00	34.60	-13.40	
7.778	34.20	48.00	0.00	34.20	-13.80	
7.897	33.90	48.00	0.00	33.90	-14.10	
7.956	33.80	48.00	0.00	33.80	-14.20	
8.015	33.90	48.00	0.00	33.90	-14.10	
8.074	34.41	48.00	0.00	34.41	-13.59	

Remarks: 1. All Readings are Peak .
2. Emission Level (dBuV) = Factor (dB) + Meter Reading (dBuV)
3. Factor (dB/m) = LISN Loss (dB) + Cable Loss (dB)

Tested by : C.C.Wu

<h1 style="text-align: center;">Radiated Emissions</h1> <h2 style="text-align: center;">FCC Part 15</h2>																				
<p>Operating conditions EUT:</p> <p>EUT powered on with scrolling “H” pattern.</p>																				
<p>Limits:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;">Frequency range (MHz)</th> <th style="width: 33%;">Class A at 10m (dBuv) QP</th> <th style="width: 33%;">Class B at 3m (dBuv) QP</th> </tr> </thead> <tbody> <tr> <td>30.0 – 88.0</td> <td>39.0</td> <td>40.0</td> </tr> <tr> <td>88.0 – 216.0</td> <td>43.5</td> <td>43.5</td> </tr> <tr> <td>216.0 – 960.0</td> <td>46.5</td> <td>46.0</td> </tr> <tr> <td>960.0 – 1000.0</td> <td>49.5</td> <td>54.0</td> </tr> <tr> <td>Above 1000.0</td> <td>49.5</td> <td>54.0 Average</td> </tr> </tbody> </table>			Frequency range (MHz)	Class A at 10m (dBuv) QP	Class B at 3m (dBuv) QP	30.0 – 88.0	39.0	40.0	88.0 – 216.0	43.5	43.5	216.0 – 960.0	46.5	46.0	960.0 – 1000.0	49.5	54.0	Above 1000.0	49.5	54.0 Average
Frequency range (MHz)	Class A at 10m (dBuv) QP	Class B at 3m (dBuv) QP																		
30.0 – 88.0	39.0	40.0																		
88.0 – 216.0	43.5	43.5																		
216.0 – 960.0	46.5	46.0																		
960.0 – 1000.0	49.5	54.0																		
Above 1000.0	49.5	54.0 Average																		
<p>Test Result :</p> <p style="text-align: center;">Passed FCC Class B Limits</p> <p>Remark:</p>																				
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 10px;"> <p>Date of Test</p> <p>Test Engineer</p> </td> <td style="width: 50%; padding: 10px;"> <p>: 24 Aug., 2002 to 26 Aug., 2002</p> <p>: C.C.Wu</p> </td> </tr> </table>			<p>Date of Test</p> <p>Test Engineer</p>	<p>: 24 Aug., 2002 to 26 Aug., 2002</p> <p>: C.C.Wu</p>																
<p>Date of Test</p> <p>Test Engineer</p>	<p>: 24 Aug., 2002 to 26 Aug., 2002</p> <p>: C.C.Wu</p>																			
<p>For detail measurement results see next pages.</p>																				

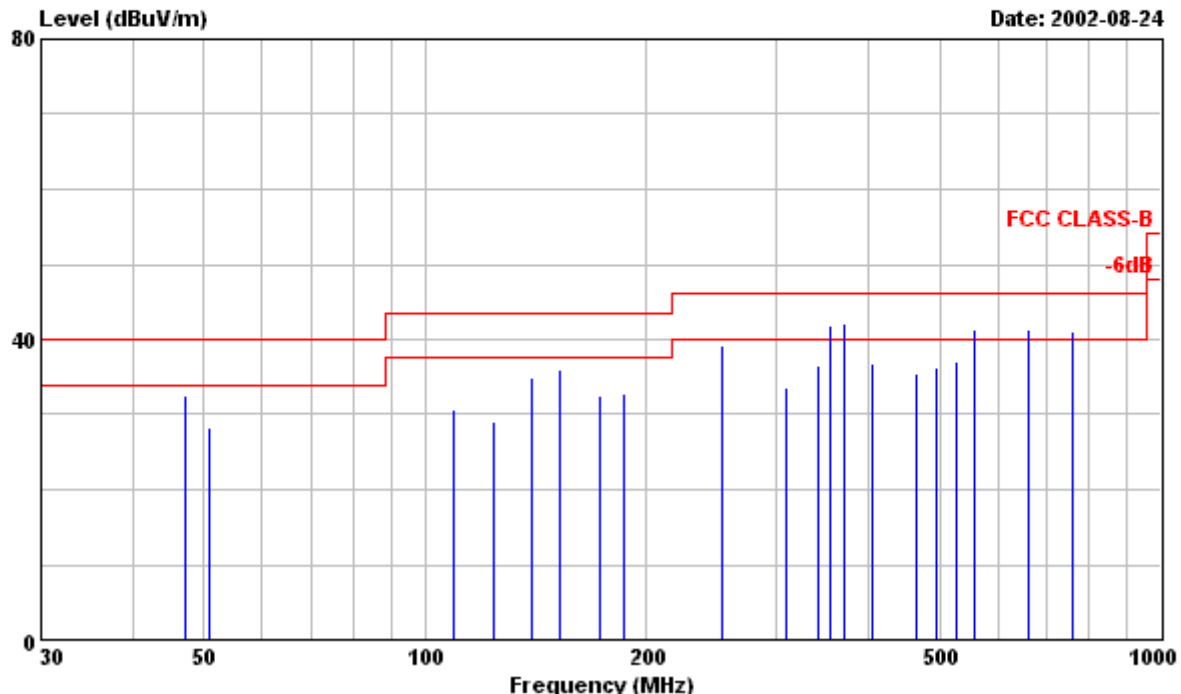


PHILIPS

Philips Electronics Industries (Taiwan) ., Ltd.
No.5, Tze Chiang 1 Road, Chungli Industrial Park,
Chungli, Taiwan, R.O.C.
Tel:+886-3-4549862 Fax:+886-3-4549887

Data#: 1

File#: C:\Program Files\em3\EMI02-045-R.emi



Site : PHILIPS EMI 3M open site
Condition : FCC CLASS-B 3m FCC-3M-FACTOR HORIZONTAL
EUT : HP P4831 Serial No:TW233PA001
Power : 120-240VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. T/R MODEL LG PANEL,RUN WIN-FCC
: "H" PATTERN.
: 3. EXTRA S-VIDEO , CVBS I/P CABLE WERE
: CONNECTED WITH 2 DUMMY LOAD.
: 4. 1600x1200/75Hz 93.7KHz MODE W/ATI
: RADEON VE DDR VIDEO CARD &
: D-SUB I/F CABLE WAS TESTED.

Frequency Peak Reading QP reading Limit Factor Emission Level Over Limit Remark
HORIZONTAL

MHz	dBuV	dBuV	dBuV/m	dB/m	dBuV/m	dBuV/m	
47.040	21.40	---	40.00	11.22	32.62	-7.38	Peak
50.730	17.60	---	40.00	10.73	28.33	-11.67	Peak
109.520	18.70	---	43.50	11.89	30.59	-12.91	Peak
124.090	16.50	---	43.50	12.48	28.98	-14.52	Peak
139.340	21.90	---	43.50	13.04	34.94	-8.56	Peak
152.200	22.50	---	43.50	13.47	35.97	-7.53	Peak
172.255	18.60	---	43.50	14.02	32.62	-10.88	Peak
186.140	17.70	---	43.50	15.03	32.73	-10.77	Peak
253.680	18.40	---	46.00	20.71	39.11	-6.89	Peak
310.230	16.80	---	46.00	16.69	33.49	-12.51	Peak

Remarks: 1. All Readings are Peak & Quasi-peak values.
2. Emission Level (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m)
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)



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Chungli, Taiwan, R.O.C.
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Frequency	Peak Reading	QP reading	Limit	Factor	Emission Level	Over Limit	Remark
HORIZONTAL							
MHz	dBuV	dBuV	dBuV/m	dB/m	dBuV/m	dBuV/m	
341.250	19.10	---	46.00	17.32	36.42	-9.58	Peak
! 355.160	24.20	---	46.00	17.60	41.80	-4.20	Peak
! 355.170	---	22.56	46.00	17.60	40.16	-5.84	QP
! 372.270	24.30	---	46.00	17.91	42.21	-3.79	Peak
372.270	---	21.43	46.00	17.91	39.34	-6.66	QP
405.900	18.40	---	46.00	18.48	36.88	-9.12	Peak
465.370	16.20	---	46.00	19.29	35.49	-10.51	Peak
496.380	16.60	---	46.00	19.66	36.26	-9.74	Peak
527.400	16.80	---	46.00	20.16	36.96	-9.04	Peak
! 558.120	20.60	---	46.00	20.62	41.22	-4.78	Peak
558.120	---	18.37	46.00	20.62	38.99	-7.01	QP
! 659.600	18.80	---	46.00	22.61	41.41	-4.59	Peak
659.600	---	16.85	46.00	22.61	39.46	-6.54	QP
! 761.080	16.80	---	46.00	24.32	41.12	-4.88	Peak
761.080	---	13.80	46.00	24.32	38.12	-7.88	QP

- Remarks: 1. All Readings are Peak & Quasi-peak values.
2. Emission Level (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m)
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)

Tested by : C C.Wu

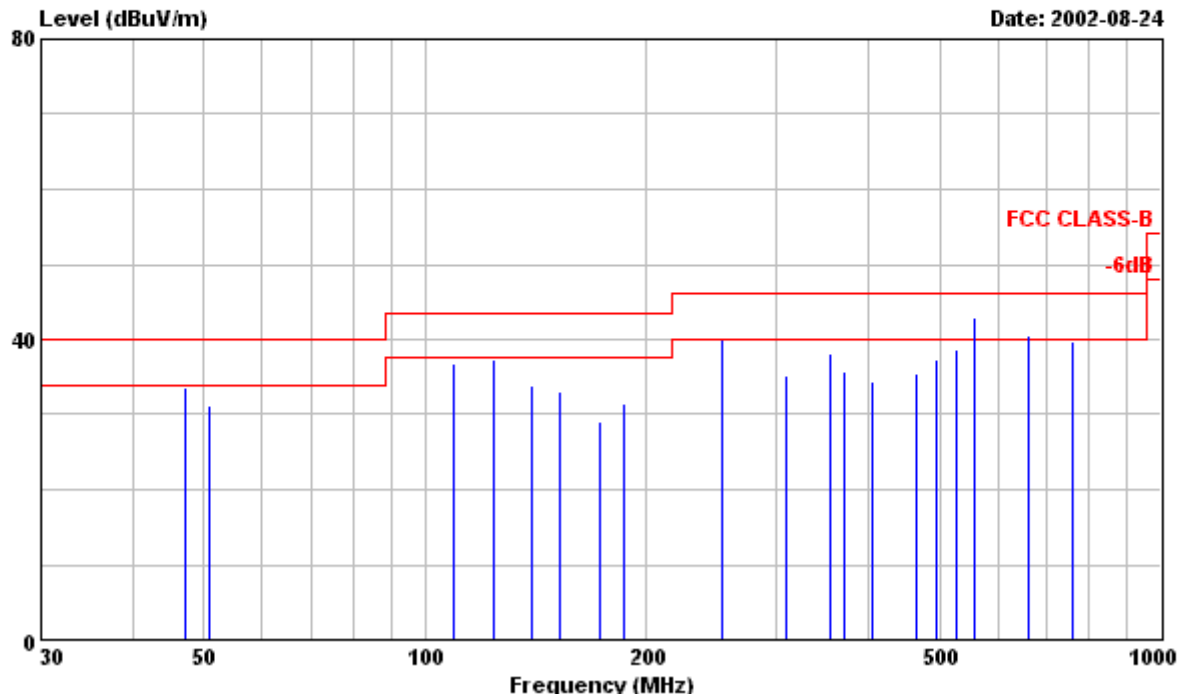


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No.5, Tze Chiang 1 Road, Chungli Industrial Park,
Chungli, Taiwan, R.O.C.
Tel:+886-3-4549862 Fax:+886-3-4549887

Data#: 2

File#: C:\Program Files\em3\EMI02-045-R.emi



Site : PHILIPS EMI 3M open site
Condition : FCC CLASS-B 3m FCC-3M-FACTOR VERTICAL
EUT : HP P4831 Serial No:TW233PA001
Power : 120-240VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. T/R MODEL LG PANEL,RUN WIN-FCC
: "H" PATTERN.
: 3. EXTRA S-VIDEO , CVBS I/P CABLE WERE
: CONNECTED WITH 2 DUMMY LOAD.
: 4. 1600x1200/75Hz 93.7KHz MODE W/ATI
: RADEON VE DDR VIDEO CARD &
: D-SUB I/F CABLE WAS TESTED.

Frequency	Peak	Reading	QP reading	Limit	Factor	Emission Level	Over Limit	Remark
MHz		dBuV	dBuV	dBuV/m	dB/m	dBuV/m	dBuV/m	
47.040		22.40	---	40.00	11.22	33.62	-6.38	Peak
50.730		20.40	---	40.00	10.73	31.13	-8.87	Peak
109.520		24.80	---	43.50	11.89	36.69	-6.81	Peak
124.090		24.90	---	43.50	12.48	37.38	-6.12	Peak
139.340		20.90	---	43.50	13.04	33.94	-9.56	Peak
152.210		19.50	---	43.50	13.47	32.97	-10.53	Peak
172.255		15.10	---	43.50	14.02	29.12	-14.38	Peak
186.140		16.40	---	43.50	15.03	31.43	-12.07	Peak
253.690		---	18.32	46.00	20.71	39.03	-6.97	QP
! 253.690		19.40	---	46.00	20.71	40.11	-5.89	Peak

Remarks: 1. All Readings are Peak & Quasi-peak values.
2. Emission Level (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m)
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)



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Chungli, Taiwan, R.O.C.
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Frequency	Peak Reading	QP reading	Limit	Factor	Emission Level	Over Limit	Remark
					VERTICAL		
MHz	dBuV	dBuV	dBuV/m	dB/m	dBuV/m	dBuV/m	
310.230	18.50	---	46.00	16.69	35.19	-10.81	Peak
355.170	20.60	---	46.00	17.60	38.20	-7.80	Peak
372.270	17.70	---	46.00	17.91	35.61	-10.39	Peak
405.900	15.80	---	46.00	18.48	34.28	-11.72	Peak
465.370	16.20	---	46.00	19.29	35.49	-10.51	Peak
496.380	17.60	---	46.00	19.66	37.26	-8.74	Peak
527.400	18.40	---	46.00	20.16	38.56	-7.44	Peak
! 558.120	---	20.49	46.00	20.62	41.11	-4.89	QP
! 558.120	22.20	---	46.00	20.62	42.82	-3.18	Peak
659.600	---	15.92	46.00	22.61	38.53	-7.47	QP
! 659.600	17.90	---	46.00	22.61	40.51	-5.49	Peak
761.080	15.50	---	46.00	24.32	39.82	-6.18	Peak

- Remarks: 1. All Readings are Peak & Quasi-peak values.
2. Emission Level (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m)
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)

Tested by : C C.Wu

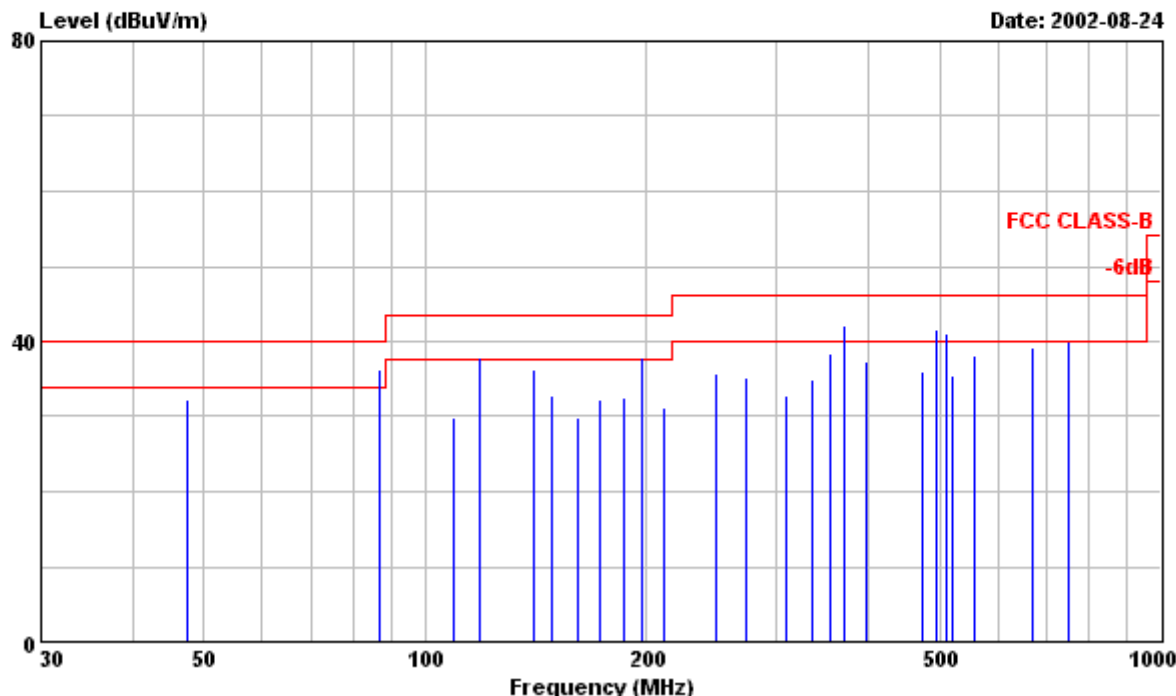


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No.5, Tze Chiang 1 Road, Chungli Industrial Park,
Chungli, Taiwan, R.O.C.
Tel:+886-3-4549862 Fax:+886-3-4549887

Data#: 3

File#: C:\Program Files\es\EMI02-045-R.emi



Site : PHILIPS EMI 3M open site
Condition : FCC CLASS-B 3m FCC-3M-FACTOR HORIZONTAL
EUT : HP P4831 Serial No:TW233PA001
Power : 120-240VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. T/R MODEL LG PANEL,RUN WIN-FCC
: "H" PATTERN.
: 3. EXTRA S-VIDEO , CVBS I/P CABLE WERE
: CONNECTED WITH 2 DUMMY LOAD.
: 4. 1280x1024/85Hz 91.1KHz MODE W/ATI
: RADEON VE DDR VIDEO CARD &
: D-SUB I/F CABLE WAS TESTED.

Frequency Peak Reading QP reading Limit Factor Emission Level Over Limit Remark
HORIZONTAL

MHz	dBuV	dBuV	dBuV/m	dB/m	dBuV/m	dBuV/m	
47.460	21.00	---	40.00	11.15	32.15	-7.85	Peak
! 86.850	25.60	---	40.00	10.75	36.35	-3.65	Peak
! 86.850	---	24.12	40.00	10.75	34.87	-5.13	QP
109.540	18.00	---	43.50	11.89	29.89	-13.61	Peak
! 118.300	25.50	---	43.50	12.30	37.80	-5.70	Peak
118.300	---	24.07	43.50	12.30	36.37	-7.13	QP
140.180	23.10	---	43.50	13.08	36.18	-7.32	Peak
148.900	19.29	---	43.50	13.38	32.67	-10.83	Peak
161.320	16.10	---	43.50	13.74	29.84	-13.66	Peak
172.210	18.20	---	43.50	14.02	32.22	-11.28	Peak

Remarks: 1. All Readings are Peak & Quasi-peak values.
2. Emission Level (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m)
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)



PHILIPS

Philips Electronics Industries (Taiwan) ., Ltd.
No.5, Tze Chiang 1 Road, Chungli Industrial Park,
Chungli, Taiwan, R.O.C.
Tel:+886-3-4549862 Fax:+886-3-4549887

Frequency	Peak Reading	QP reading	Limit	Factor	Emission Level	Over Limit	Remark
HORIZONTAL							
MHz	dBuV	dBuV	dBuV/m	dB/m	dBuV/m	dBuV/m	
186.140	17.50	---	43.50	15.03	32.53	-10.97	Peak
! 197.160	21.70	---	43.50	16.05	37.75	-5.75	Peak
197.160	---	20.45	43.50	16.05	36.50	-7.00	QP
210.960	14.00	---	43.50	17.28	31.28	-12.22	Peak
248.190	15.30	---	46.00	20.37	35.67	-10.33	Peak
273.020	13.50	---	46.00	21.80	35.30	-10.70	Peak
310.230	16.20	---	46.00	16.69	32.89	-13.11	Peak
335.050	17.80	---	46.00	17.20	35.00	-11.00	Peak
354.890	20.80	---	46.00	17.60	38.40	-7.60	Peak
! 372.270	24.10	---	46.00	17.91	42.01	-3.99	Peak
372.270	---	22.07	46.00	17.91	39.98	-6.02	QP
397.070	19.00	---	46.00	18.35	37.35	-8.65	Peak
473.190	16.70	---	46.00	19.39	36.09	-9.91	Peak
! 496.370	21.90	---	46.00	19.66	41.56	-4.44	Peak
496.370	---	20.11	46.00	19.66	39.77	-6.23	QP
! 512.620	21.10	---	46.00	19.90	41.00	-5.00	Peak
512.620	---	18.20	46.00	19.90	38.10	-7.90	QP
521.210	15.30	---	46.00	20.05	35.35	-10.65	Peak
558.410	17.50	---	46.00	20.62	38.12	-7.88	Peak
670.350	16.30	---	46.00	22.87	39.17	-6.83	Peak
749.220	15.70	---	46.00	24.18	39.88	-6.12	Peak

- Remarks: 1. All Readings are Peak & Quasi-peak values.
2. Emission Level (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m)
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)

Tested by : C C.Wu

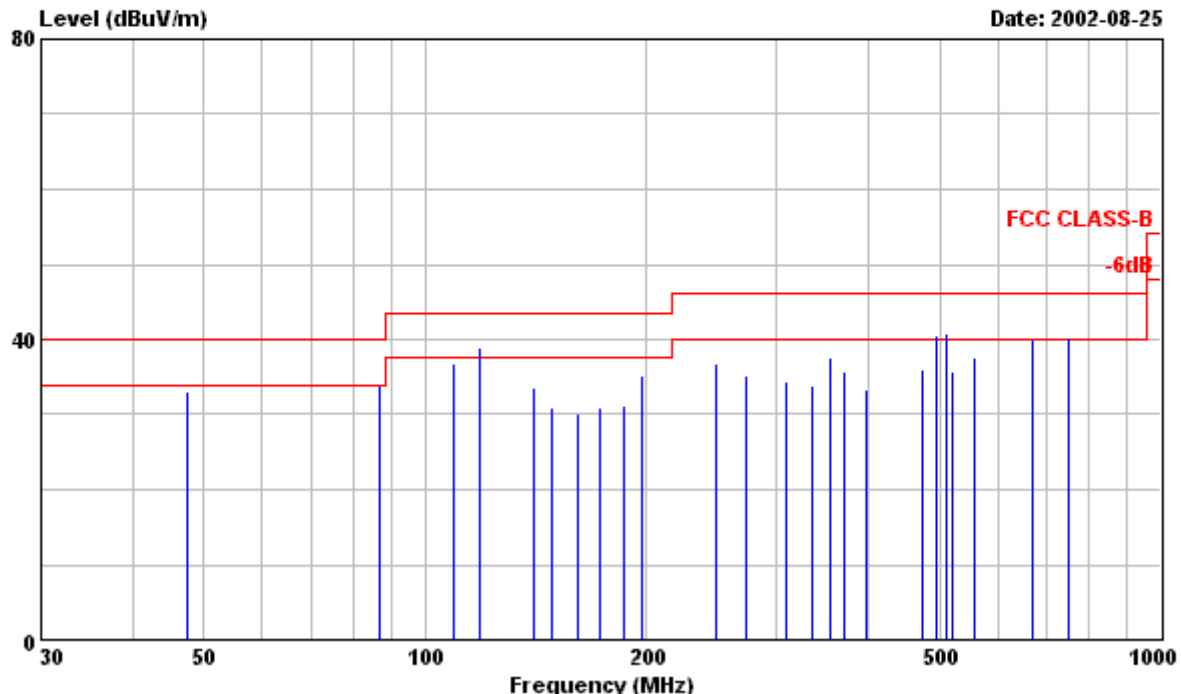


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Philips Electronics Industries (Taiwan)., Ltd.
No.5, Tze Chiang 1 Road, Chungli Industrial Park,
Chungli, Taiwan, R.O.C.
Tel:+886-3-4549862 Fax:+886-3-4549887

Data#: 4

File#: C:\Program Files\es\EMI02-045-R.emi



Site : PHILIPS EMI 3M open site
Condition : FCC CLASS-B 3m FCC-3M-FACTOR VERTICAL
EUT : HP P4831 Serial No:TW233PA001
Power : 120-240VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. T/R MODEL LG PANEL,RUN WIN-FCC
: "H" PATTERN.
: 3. EXTRA S-VIDEO , CVBS I/P CABLE WERE
: CONNECTED WITH 2 DUMMY LOAD.
: 4. 1280x1024/85Hz 91.1KHz MODE W/ATI
: RADEON VE DDR VIDEO CARD &
: D-SUB I/F CABLE WAS TESTED.

Frequency	Peak	Reading	QP reading	Limit	Factor	Emission Level	Over Limit	Remark
MHz		dBuV	dBuV	dBuV/m	dB/m	dBuV/m	dBuV/m	
47.460		22.00	---	40.00	11.15	33.15	-6.85	Peak
86.650		23.20	---	40.00	10.73	33.93	-6.07	Peak
109.540		24.90	---	43.50	11.89	36.79	-6.71	Peak
! 118.300		---	25.28	43.50	12.30	37.58	-5.92	QP
! 118.300		26.70	---	43.50	12.30	39.00	-4.50	Peak
140.180		20.60	---	43.50	13.08	33.68	-9.82	Peak
148.900		17.50	---	43.50	13.38	30.88	-12.62	Peak
161.320		16.30	---	43.50	13.74	30.04	-13.46	Peak
172.210		16.80	---	43.50	14.02	30.82	-12.68	Peak
186.140		16.20	---	43.50	15.03	31.23	-12.27	Peak

Remarks: 1. All Readings are Peak & Quasi-peak values.
2. Emission Level (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m)
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)



PHILIPS

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No.5, Tze Chiang 1 Road, Chungli Industrial Park,
Chungli, Taiwan, R.O.C.
Tel:+886-3-4549862 Fax:+886-3-4549887

Frequency	Peak Reading	QP reading	Limit	Factor	Emission Level	Over Limit	Remark
					VERTICAL		
MHz	dBuV	dBuV	dBuV/m	dB/m	dBuV/m	dBuV/m	
197.160	19.10	---	43.50	16.05	35.15	-8.35	Peak
248.190	16.40	---	46.00	20.37	36.77	-9.23	Peak
273.020	13.30	---	46.00	21.80	35.10	-10.90	Peak
310.230	17.70	---	46.00	16.69	34.39	-11.61	Peak
335.050	16.70	---	46.00	17.20	33.90	-12.10	Peak
354.890	20.10	---	46.00	17.60	37.70	-8.30	Peak
372.270	17.70	---	46.00	17.91	35.61	-10.39	Peak
397.070	15.10	---	46.00	18.35	33.45	-12.55	Peak
473.190	16.50	---	46.00	19.39	35.89	-10.11	Peak
496.370	---	17.80	46.00	19.66	37.46	-8.54	QP
! 496.370	20.90	---	46.00	19.66	40.56	-5.44	Peak
512.620	---	19.46	46.00	19.90	39.36	-6.64	QP
! 512.620	21.00	---	46.00	19.90	40.90	-5.10	Peak
521.210	15.70	---	46.00	20.05	35.75	-10.25	Peak
558.410	17.10	---	46.00	20.62	37.72	-8.28	Peak
670.350	17.10	---	46.00	22.87	39.97	-6.03	Peak
749.220	---	13.20	46.00	24.18	37.38	-8.62	QP
! 749.220	16.00	---	46.00	24.18	40.18	-5.82	Peak

- Remarks: 1. All Readings are Peak & Quasi-peak values.
2. Emission Level (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m)
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)

Tested by : C C.Wu

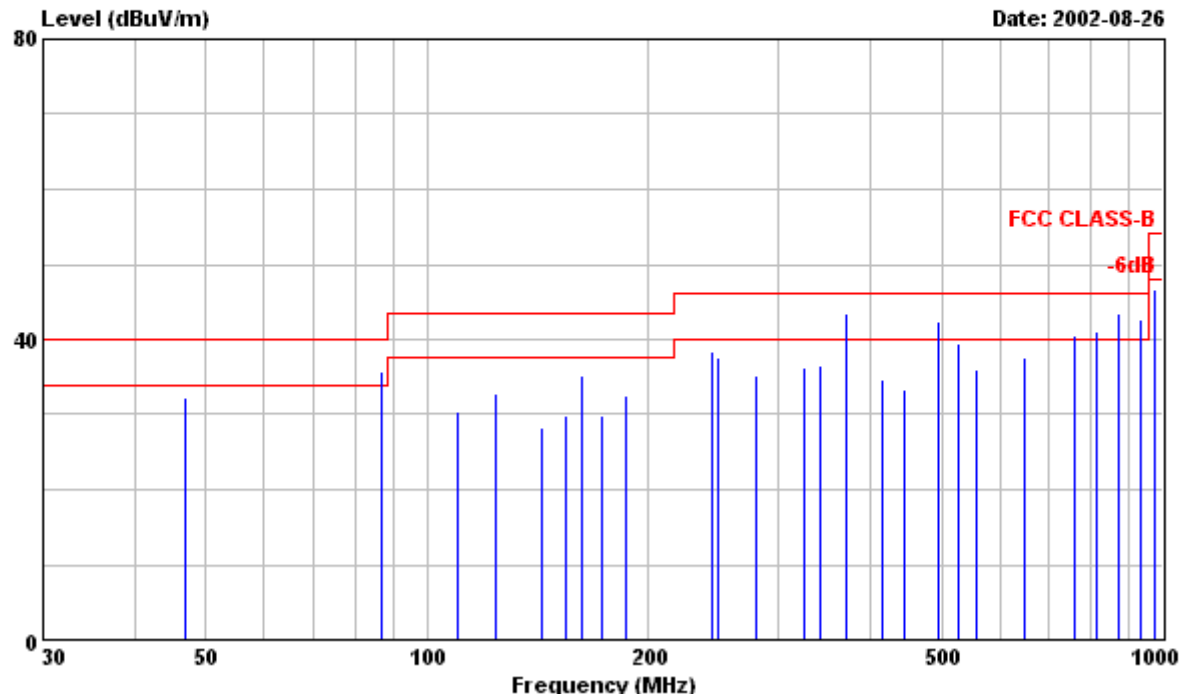


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No.5, Tze Chiang 1 Road, Chungli Industrial Park,
Chungli, Taiwan, R.O.C.
Tel:+886-3-4549862 Fax:+886-3-4549887

Data#: 5

File#: C:\Program Files\em3\EMI02-045-R.emi



Site : PHILIPS EMI 3M open site
Condition : FCC CLASS-B 3m FCC-3M-FACTOR HORIZONTAL
EUT : HP P4831 Serial No:TW233PA001
Power : 120-240VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. T/R MODEL LG PANEL,RUN WIN-FCC
: "H" PATTERN.
: 3. EXTRA S-VIDEO , CVBS I/P CABLE WERE
: CONNECTED WITH 2 DUMMY LOAD.
: 4. 1600x1200/60Hz 75KHz MODE W/ATI
: RADEON VE DDR VIDEO CARD &
: DVI I/F CABLE WAS TESTED.

Frequency Peak Reading QP reading Limit Factor Emission Level Over Limit Remark
HORIZONTAL

MHz	dBuV	dBuV	dBuV/m	dB/m	dBuV/m	dBuV/m	
46.950	21.00	---	40.00	11.22	32.22	-7.78	Peak
! 86.780	---	24.00	40.00	10.75	34.75	-5.25	QP
! 86.780	25.10	---	40.00	10.75	35.85	-4.15	Peak
109.850	18.50	---	43.50	11.91	30.41	-13.09	Peak
124.100	20.20	---	43.50	12.48	32.68	-10.82	Peak
142.680	15.01	---	43.50	13.16	28.17	-15.33	Peak
154.600	16.30	---	43.50	13.55	29.85	-13.65	Peak
162.230	21.39	---	43.50	13.76	35.15	-8.35	Peak
172.340	15.90	---	43.50	14.04	29.94	-13.56	Peak
186.150	17.50	---	43.50	15.03	32.53	-10.97	Peak

Remarks: 1. All Readings are Peak & Quasi-peak values.
2. Emission Level (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m)
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)



PHILIPS

Philips Electronics Industries (Taiwan) Ltd.
No.5, Tze Chiang 1 Road, Chungli Industrial Park,
Chungli, Taiwan, R.O.C.
Tel:+886-3-4549862 Fax:+886-3-4549887

Frequency	Peak Reading	QP reading	Limit	Factor	Emission Level	Over Limit	Remark
HORIZONTAL							
MHz	dBuV	dBuV	dBuV/m	dB/m	dBuV/m	dBuV/m	
243.340	18.30	---	46.00	19.98	38.28	-7.72	Peak
248.180	17.10	---	46.00	20.37	37.47	-8.53	Peak
279.210	13.10	---	46.00	22.11	35.21	-10.79	Peak
324.450	19.30	---	46.00	16.99	36.29	-9.71	Peak
341.260	19.20	---	46.00	17.32	36.52	-9.48	Peak
! 372.270	25.60	---	46.00	17.91	43.51	-2.49	Peak
! 372.270	---	23.90	46.00	17.91	41.81	-4.19	QP
415.220	16.00	---	46.00	18.61	34.61	-11.39	Peak
446.130	14.40	---	46.00	19.04	33.44	-12.56	Peak
! 496.380	---	20.93	46.00	19.66	40.59	-5.41	QP
! 496.380	22.80	---	46.00	19.66	42.46	-3.54	Peak
527.410	19.30	---	46.00	20.16	39.46	-6.54	Peak
528.080	17.80	---	46.00	20.16	37.96	-8.04	Peak
558.410	15.50	---	46.00	20.62	36.12	-9.88	Peak
648.910	15.10	---	46.00	22.40	37.50	-8.50	Peak
! 758.850	16.20	---	46.00	24.29	40.49	-5.51	Peak
! 811.130	16.20	---	46.00	24.98	41.18	-4.82	Peak
811.130	---	13.50	46.00	24.98	38.48	-7.52	QP
! 868.650	17.70	---	46.00	25.86	43.56	-2.44	Peak
! 868.650	---	14.86	46.00	25.86	40.72	-5.28	QP
! 932.800	15.90	---	46.00	26.73	42.63	-3.37	Peak
932.800	---	13.20	46.00	26.73	39.93	-6.07	QP
973.370	19.40	---	54.00	27.25	46.65	-7.35	Peak

- Remarks: 1. All Readings are Peak & Quasi-peak values.
2. Emission Level (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m)
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)

Tested by : C C.Wu

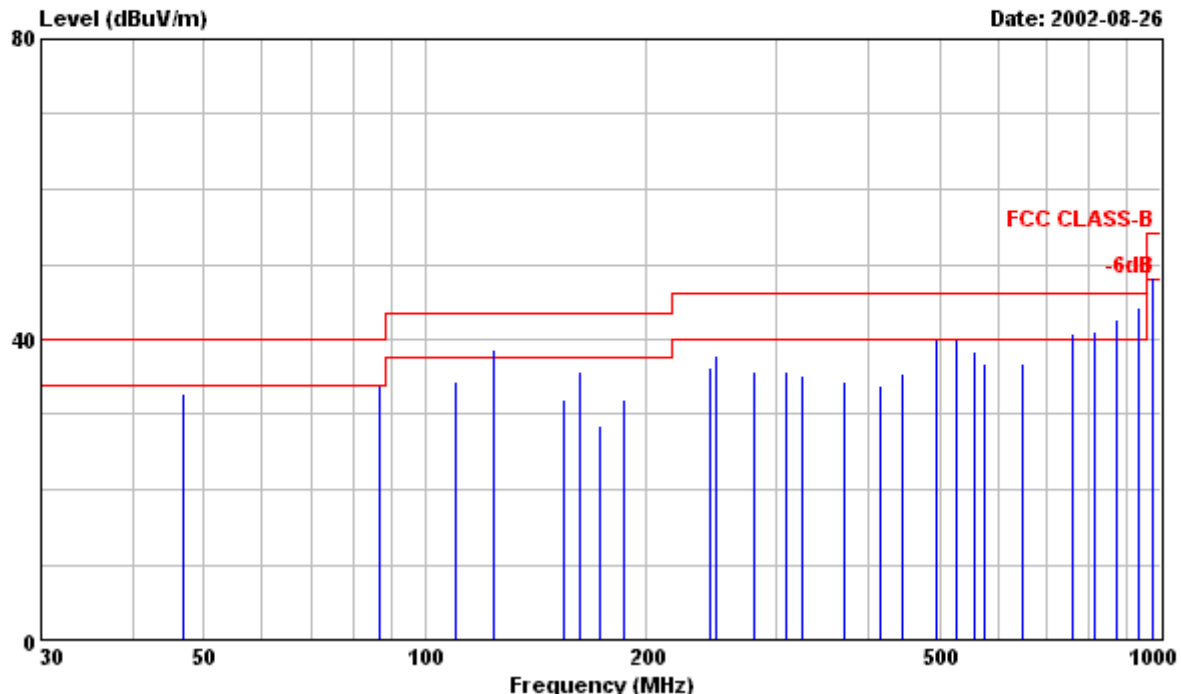


PHILIPS

Philips Electronics Industries (Taiwan)., Ltd.
No.5, Tze Chiang 1 Road, Chungli Industrial Park,
Chungli, Taiwan, R.O.C.
Tel:+886-3-4549862 Fax:+886-3-4549887

Data#: 6

File#: C:\Program Files\em3\EMI02-045-R.emi



Site : PHILIPS EMI 3M open site
Condition : FCC CLASS-B 3m FCC-3M-FACTOR VERTICAL
EUT : HP P4831 Serial No:TW233PA001
Power : 120-240VAC
Memo : 1. EMI EVALUATION FOR FCC SAMPLE.
: 2. T/R MODEL LG PANEL,RUN WIN-FCC
: "H" PATTERN.
: 3. EXTRA S-VIDEO , CVBS I/P CABLE WERE
: CONNECTED WITH 2 DUMMY LOAD.
: 4. 1600x1200/60Hz 75KHz MODE W/ATI
: RADEON VE DDR VIDEO CARD &
: DVI I/F CABLE WAS TESTED.

Frequency Peak Reading QP reading Limit Factor Emission Level Over Limit Remark
VERTICAL

MHz	dBuV	dBuV	dBuV/m	dB/m	dBuV/m	dBuV/m	
46.950	21.50	---	40.00	11.22	32.72	-7.28	Peak
86.780	23.20	---	40.00	10.75	33.95	-6.05	Peak
109.850	22.40	---	43.50	11.91	34.31	-9.19	Peak
109.850	---	20.33	43.50	11.91	32.24	-11.26	QP
124.100	---	24.54	43.50	12.48	37.02	-6.48	QP
! 124.100	26.20	---	43.50	12.48	38.68	-4.82	Peak
154.600	18.40	---	43.50	13.55	31.95	-11.55	Peak
162.230	21.89	---	43.50	13.76	35.65	-7.85	Peak
172.340	14.40	---	43.50	14.04	28.44	-15.06	Peak
186.150	16.90	---	43.50	15.03	31.93	-11.57	Peak

Remarks: 1. All Readings are Peak & Quasi-peak values.
2. Emission Level (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m)
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)



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Frequency	Peak Reading	QP reading	Limit	Factor	Emission Level	Over Limit	Remark
MHz	dBuV	dBuV	dBuV/m	dB/m	VERTICAL		
					dBuV/m	dBuV/m	
243.340	16.19	---	46.00	19.98	36.17	-9.83	Peak
248.180	17.40	---	46.00	20.37	37.77	-8.23	Peak
279.210	13.60	---	46.00	22.11	35.71	-10.29	Peak
310.230	19.00	---	46.00	16.69	35.69	-10.31	Peak
324.450	18.20	---	46.00	16.99	35.19	-10.81	Peak
372.270	16.50	---	46.00	17.91	34.41	-11.59	Peak
415.220	15.20	---	46.00	18.61	33.81	-12.19	Peak
446.130	16.50	---	46.00	19.04	35.54	-10.46	Peak
! 496.380	20.40	---	46.00	19.66	40.06	-5.94	Peak
! 527.410	19.90	---	46.00	20.16	40.06	-5.94	Peak
527.410	---	16.91	46.00	20.16	37.07	-8.93	QP
528.080	16.90	---	46.00	20.16	37.06	-8.94	Peak
558.410	17.90	---	46.00	20.62	38.52	-7.48	Peak
576.800	15.80	---	46.00	20.88	36.68	-9.32	Peak
648.910	14.50	---	46.00	22.40	36.90	-9.10	Peak
! 758.850	16.50	---	46.00	24.29	40.79	-5.21	Peak
758.850	---	14.30	46.00	24.29	38.59	-7.41	QP
811.130	---	13.20	46.00	24.98	38.18	-7.82	QP
! 811.130	16.10	---	46.00	24.98	41.08	-4.92	Peak
! 868.650	16.80	---	46.00	25.86	42.66	-3.34	Peak
! 868.650	---	14.90	46.00	25.86	40.76	-5.24	QP
! 932.800	17.60	---	46.00	26.73	44.33	-1.67	Peak
! 932.800	---	15.50	46.00	26.73	42.23	-3.77	QP
973.370	---	16.90	54.00	27.25	44.15	-9.85	QP
! 973.370	20.90	---	54.00	27.25	48.15	-5.85	Peak

- Remarks: 1. All Readings are Peak & Quasi-peak values.
2. Emission Level (dBuV/m) = Factor (dB/m) + Meter Reading (dBuV/m)
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)

Tested by : C C.Wu